DOCUMENT RESUME

ED 136 387 EA 009 304

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TITLE Education's Need for Small-Area Low-Income Data with Reference to Title I, Elementary and Secondary Education Act.
PUB DATE Jun 76
NOTE 8p.; Paper presented at the Conference on Small-Area Statistics (Atlanta, Georgia, August 25, 1975); Pages 30-36 of "Business Uses of Small-Area Statistics and Education's Needs and Methods for Estimating Low-Income Population: Small-Area Statistics Papers Series GE-41, No.2" Footnotes may be marginally legible due to small type on original document
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EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Census Figures; Cost Indexes; Educational Finance; *Educationally Disadvantaged; Elementary Secondary Education; *Equal Education: *Low Income; School Demography; *State Federal Aid; *Statistical Data
IDENTIFIERS *Elementary Secondary Education Act Title I; ESEA Title I

ABSTRACT

This paper describes the need of educators for small-area data on low-income populations, how it has been met in the past ten years, and some of the steps that have been taken to improve the effectiveness of the data for federal purposes. The first section concentrates on how concern for the low-income pupil is translated into a quantitative formula that permits implementation at the local level. The second section discusses the reasons for the failure of the formula in the original act of 1965, particularly its failure to maintain currency. The next section examines the process of reform and the results that emerged from joint consideration of policy needs and data requirements. Finally, the fourth section explores educational requirements for low-income data in addition to those derived from the program for the disadvantaged that constitutes the primary topic of this paper. (Author/MLF)

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Education's Need for Small-Area Low-Income Data With Reference to Title I, Elementary and Secondary Education Act*

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INTRODUCTION

Of all the users of small-area data on low-income populations, education is generally not considered an important or major one. But at the Federal level, the need is crucial. This paper attempts to describe that need, how it has been met in the past 10 years, and some of the steps that have been taken to improve the effectiveness of the data for Federal purposes.

The requirement stems principally from the importance attached at the Federal level to the objective of providing equal educational opportunity for all children. Although the Federal Government provides less than 10 percent of the Nation's total educational revenues, it plays a central role in the move to equalize educational opportunities for particular population groups. Some of these funds go to help improve the education of the handicapped or of those whose family speaks a language other than English. But the bulk of the money—some $2 billion this year—is allocated to provide supplementary school services to the educationally disadvantaged through title I of the Elementary and Secondary Education Act. The discussion in this paper is directed primarily to this act.

It is well documented that a student's performance in school is significantly correlated with his family's situation—and in particular with its economic status.[1] Speaking more carefully, it has been shown that children from families at low levels of income suffer a disadvantage in school that is out of proportion to the population at large. Of course, we all know that children from many walks of life often share such a disadvantage. But children from wealthier homes at least have the resources to provide them special assistance that may get them back on the educational track. Children from low-income homes not only lack the family resources to pay for extra educational assistance, but often suffer from lower parental involvement in education.[2] Finally, school districts in which there are concentrations of such disadvantaged children may be less able than other districts to provide, from local funds, the extra services these children require.[3]

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For all these reasons, the low-income pupil is a priority Federal target. This paper concentrates on how this general concern is translated into a quantitative formula that permits implementation at the local level. The second section discusses the reasons for the failure of the formula in the original act of 1965, particularly its failure to maintain currency. The next section examines the process of reform and the results that emerged from joint consideration of policy needs and data requirements. Finally, the fourth section explores educational requirements for low-income data in addition to those derived from the program for the disadvantaged that constitutes the primary topic of this paper.

THE 1965 FORMULA

The Elementary and Secondary Education Act of 1965 was a major thrust toward the goal of helping the educationally disadvantaged population. We will be concerned here with part A of title I, through which more than 90 percent of the act's funds are allocated by formula to State governments.[4] The allocation is based on the number of a State's low-income children, modified by a payment rate that reflects a State's average school expenditure per child. The formula embedded in the act calculates not only the share for each of the States but also each State's allocation down to the county level. Since the formula employs census data, which is generally available only to the county level, allocations to school districts that are subparts of counties are calculated by the State governments.

Under the 1965 formula, the number of economically disadvantaged children eligible for the title I program was defined as the sum of two groups:[5]

Children of school age (5 to 17) from families with income of less than $2,000 according to the 1960 census, and

Children from families in the program of Aid to Families with Dependent Children (AFDC) whose payments from the program exceeded $2,000.

This formulation suffered from its failure to maintain currency. For one thing, although the Federal Government recomputes the title I allocations each year, only one of the two components can be updated. The AFDC component is updated; the census-related figure remains uncorrected until the next decennial census. For another, there was no provision for updating the $2,000 threshold. This had a dual effect: The

*This paper reflects the views of the authors and does not necessarily represent the policy of the U.S. Department of Health, Education, and Welfare.

[1] One recent study found correlations of from 50 to 60 percent between low family income of a child and the child's low scores on standardized achievement tests. Another study found that of all children coming from homes with income below $3,000, some 45 percent were identified by their teachers as having persistent reading problems (1970 Elementary and Secondary School Survey of the U.S. Office of Education Special Tabulation).

[2] See for example, Hill, C.R. and F.P. Stafford, "Family Background and Lifetime Earnings," paper presented to a National Bureau of Economic Research Conference on Income and Wealth, 1974.

[3] The many low-income children in center-city school districts would appear to be an exception, since these districts have a relatively high tax base per pupil. Center cities, however, must fund high levels of noneducational public services that diminish the tax base actually available to support education.

[4] Part B allocates additional funds to those school districts in which there are very large concentrations of low-income families in recognition that greater supplementary services (per pupil) may be necessary in such areas. Part C allocates additional funds to those States that already exert a tax effort for public education higher than the average national effort.

[5] The formula also counts the children in State institutions for neglected and delinquent children. This group of children is not germane to the present discussion, since family income is not a criterion for their eligibility.

EA 009 304

count of children from poverty families (less than $2,000) became decreasingly representative of the true poverty population, while the number of AFDC children eligible for title I increased significantly over the years.

The AFDC increase was attributable in part to the growth throughout the country of the concept of aid to such families and in part to the fact that, in the various States, changing welfare payment schedules increased the fraction of these families whose annual benefits were $2,000 or more. One factor which should be kept in mind is that States are free to set their own welfare standards; those that set relatively high levels would automatically increase their count to title I eligibles. Another problem is that the children whose parents worked, but at relatively low wages—say, $3,000—would not be counted at all.

The growth in AFDC numbers was inequitable—not primarily because this component was updated while the other component was not; rather, the fault was in the method of updating, with its differential impact on the incidence of the eligible populations in different geographic areas. That is to say that if AFDC had been a pretty good surrogate of children from homes in which the family income is less than $2,000, updating one without updating the other would not create inequities; but in that event there would not have been any need for the two separate components. In fact, however, the two occur in different places with different intensities, as we will show below. Moreover, if the formula had been properly implemented, the count of low-income children would have been adjusted to exclude those counted as eligible under AFDC; this exclusion was not made. The effect of this failure could have been reduced if the eligibility level for AFDC families had been increased. This adjustment was not made either, and the result was a double-counting that further intensified whatever maldistributions occurred solely from the growth in the AFDC count.

The release of 1970 census income data—far from improving the accuracy of the allocation, as would ordinarily be expected—actually worsened it because of the way the data were applied. The 1970 data were used without adjusting the income standard to reflect the higher living costs prevailing in 1970 compared with those in 1960.[6] The dollar incomes of many poor families did indeed rise during the 1960's, but not commensurably with the increased costs of living. Thus, with the standard of poverty fixed at $2,000, families that everyone would have agreed were poor in 1970 were not counted as poor because the 1960 yardstick was still being applied.

One further drawback of the 1965 formula was that it used a single flat figure for poverty—$2,000. Obviously, at today's prices $2,000 is inadequate, and it may well have been inadequate in 1965 when the act was passed. Aside from that fact, however, the use of a flat figure for all situations ignores the influence of and differences among such factors as family size, age of family members, differences in cost of living from city to rural areas and from region to region. The payment rate provision, discussed below, is an attempt to deal with the last of these flaws, but the others are significant ones for which no adjustments were made.

These difficulties and the anomalies that they led to did not escape notice. By 1972, when the Congress began debate on how the title I formula should be revised, major changes had taken place, as can be seen in table 1. For 1965 and 1972, we show, for each State, the counts of poverty children, AFDC children, the total of the two, and the percentage title I eligible children are of the total national population.

In 1965, the AFDC portion of the formula contributed about 583,000 eligible children, or 10 percent of the total children counted as eligible for title I. By 1972, the updated AFDC counts had increased the number from this component to 2.9 million, or more than half of the total. In contrast, the poverty children—those from families of income less than $2,000—fell from almost 5 million to 2.6 million between the 1960 and 1970 censuses.

These changes did not occur uniformly throughout the Nation, and this has an important impact, in terms of funds received, on how the States fare under the allocation procedure. Although Congress generally intends to allocate a sufficient amount of funding to reach every eligible child, the appropriations from title I are never sufficient to fully fund the program. In that case, each State's funding is based on the proportion that its number of eligibles bears to the total number of eligibles. These important percentages are presented in columns 2 and 6 of table 1, for 1965 and 1972 respectively. The real impact of the changes over this time can be seen by reviewing the figures for certain States.

The Northern urban States, which generally set quite high welfare payment levels, contain most of the AFDC-eligible children, and thus these States uniformly made the principal gains in eligibility. California, New Jersey, and New York more than doubled their percentage of the national total. The greatest relative losses in eligible population were concentrated in those States with low AFDC standards, and this occurs particularly in the poor Southern States. (Note that Georgia, where this meeting is being held, had no AFDC eligibles in either year.) Many States suffered more than a 50-percent diminution in their share of total eligibles.

We noted above that a State's title I allocation depends not only on the number of economically disadvantaged and the proportion that that number bears to the Nation's total, but also on its so-called payment rate. Although this part of the overall allocation process is not germane to the discussion of the formula, it is another instance of the interdependence between data availability and policy decisions; it also illustrates another area in which there is a gap between the need for data and the availability of data.

To attempt to make the payments to each State more equitable, it is desirable to adjust payments to recognize the differences among the States in their cost of education in relation to average national costs. That is, a given title I allocation per pupil will buy less supplementary services in a State that has high educational costs than in one in which costs for equivalent services are low, and the payments should be adjusted to reflect this fact. The 1965 act incorporated an adjustment that could be regarded as a crude attempt to recognize this need and to adjust for it. It established the payment rate that a State would receive at one-half the State's average per-pupil expenditure or at one-half the national average per-pupil expenditure—whichever is greater for each State. Because per-pupil expenditure data are available within several years after the money is spent, it is not difficult to update the payment rate.

[6] A generally accepted measure of the cost of living is the Consumer Price Index. Between 1960 and 1970 the CPI increased by 31 percent. Sources: U.S. Bureau of Labor Statistics, as quoted in Statistical Abstract of the United States: 1974, p. 404.

Table 1. Number of Low-Income Children Under Original Grant Eligibility Standard: 1965-1972

(Children in thousands)

State	1965				1972			
	Total	Percent of national total	Under $2,000 (1960 census)	AFDC, over $2,000 (1962)	Total	Percent of national total	Under $2,000 (1970 census)	AFDC, over $2,000 (1971)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total	5,530.7	100.0	4,948.1	582.6	5,567.4	100.0	2,645.8	2,921.6
Alabama	242.5	4.4	242.5	-	97.1	1.7	96.0	1.1
Alaska	5.7	0.1	4.8	0.9	8.7	0.2	4.3	4.4
Arizona	44.5	0.8	38.9	5.6	47.0	0.8	29.3	17.7
Arkansas	148.2	2.7	148.2	-	52.2	0.9	52.2	-
California	308.7	5.6	206.6	102.1	780.8	14.0	214.4	566.4
Colorado	40.9	0.7	33.6	7.3	57.9	1.0	25.4	32.5
Connecticut	28.3	0.5	20.7	7.6	64.5	1.2	22.2	42.3
Delaware	7.4	0.1	7.4	-	10.8	0.2	5.6	5.2
District of Columbia	20.8	0.4	14.9	59.0	43.7	0.8	13.3	30.6
Florida	142.5	2.6	142.5	-	120.0	2.2	100.7	19.3
Georgia	239.8	4.3	239.8	-	93.1	1.7	93.1	-
Hawaii	11.2	0.2	8.8	2.4	18.6	0.3	7.2	11.4
Idaho	14.7	0.3	12.3	2.4	13.0	0.2	7.4	5.6
Illinois	230.0	4.2	147.5	82.5	315.1	5.7	103.8	211.3
Indiana	79.9	1.4	76.4	3.5	73.6	1.3	41.8	31.8
Iowa	81.1	1.5	71.8	9.3	49.8	0.9	22.5	27.3
Kansas	45.7	0.8	40.3	5.4	50.0	0.9	22.1	27.9
Kentucky	193.6	3.5	193.6	-	98.3	1.8	68.8	29.5
Louisiana	201.3	3.6	201.1	0.2	126.6	2.3	114.6	12.0
Maine	21.1	0.4	18.4	2.7	27.4	0.5	10.1	17.3
Maryland	63.1	1.1	53.7	9.4	97.0	1.7	43.1	53.9
Massachusetts	63.9	1.2	47.1	16.8	146.5	2.6	41.7	104.8
Michigan	145.7	2.6	124.7	21.0	232.5	4.2	83.7	148.8
Minnesota	89.0	1.6	77.3	11.7	71.5	1.3	31.9	39.6
Mississippi	254.9	4.6	254.9	-	98.7	1.8	98.7	-
Missouri	136.5	2.5	125.2	11.3	94.6	1.7	59.2	35.4
Montana	15.6	0.3	14.1	1.5	13.8	0.2	8.2	5.6
Nebraska	35.1	0.6	34.4	0.7	30.3	0.5	15.8	14.5
Nevada	3.9	0.1	3.2	0.7	6.4	0.1	4.0	2.4
New Hampshire	7.0	0.1	5.9	1.1	9.9	0.2	4.5	5.4
New Jersey	85.3	1.5	59.8	25.5	223.6	4.0	57.7	165.9
New Mexico	41.9	0.8	37.6	4.3	43.1	0.8	27.9	15.2
New York	300.0	5.4	200.1	99.9	747.9	13.4	194.6	553.3
North Carolina	326.6	5.9	323.1	3.5	123.6	2.2	99.2	24.4
North Dakota	25.1	0.5	23.3	1.8	12.9	0.2	8.1	4.8
Ohio	177.4	3.2	151.9	25.5	217.5	3.9	104.1	113.4
Oklahoma	95.9	1.7	84.8	11.2	32.5	0.6	37.3	28.8
Oregon	30.2	0.5	23.9	6.3	47.3	0.8	19.6	27.7
Pennsylvania	235.7	4.3	175.4	60.3	325.2	5.8	102.0	223.2
Rhode Island	16.1	0.3	12.1	4.0	25.8	0.5	8.8	17.0
South Carolina	206.6	3.7	206.6	-	75.8	1.4	71.8	4.0
South Dakota	32.2	0.6	30.7	1.5	17.9	0.3	10.8	7.1
Tennessee	220.0	4.0	220.0	-	81.8	1.5	81.8	-
Texas	398.2	7.2	398.2	-	257.9	4.6	192.6	65.3
Utah	13.8	0.2	11.7	2.1	21.2	0.4	9.5	11.6
Vermont	7.8	0.1	7.2	5.8	9.3	0.2	3.5	5.8
Virginia	171.0	3.1	167.9	3.1	110.8	2.0	67.8	43.0
Washington	42.9	0.8	33.1	9.9	66.8	1.2	29.7	37.1
West Virginia	106.5	1.9	106.4	0.1	50.2	0.9	35.5	14.7
Wisconsin	68.9	1.2	58.4	10.4	70.0	1.3	34.6	35.4
Wyoming	6.1	0.1	5.4	0.7	5.1	0.1	3.3	1.8

- Represents zero.

Source: Unpublished data from National Center for Educational Statistics.

Table 2. Title I Payment Rates: 1972

State	Percent of national average	State	Percent of national average
Total	100.0	Montana	90.6
		Nebraska	92.8
Alabama	63.3	Nevada	95.6
Alaska	171.8	New Hampshire	86.5
Arizona	87.9	New Jersey	128.3
Arkansas	60.6		
California	99.6	New Mexico	82.0
		New York	166.2
Colorado	94.8	North Carolina	70.9
Connecticut	121.5	North Dakota	81.1
Delaware	118.8	Ohio	88.3
Florida	90.7		
Georgia	67.8	Oklahoma	73.0
		Oregon	111.4
Hawaii	108.2	Pennsylvania	110.6
Idaho	72.0	Rhode Island	111.2
Illinois	111.4	South Carolina	68.6
Indiana	91.5		
Iowa	101.7	South Dakota	79.6
		Tennessee	65.2
Kansas	88.9	Texas	78.7
Kentucky	64.5	Utah	77.0
Louisiana	87.4	Vermont	99.1
Maine	84.5		
Maryland	115.6	Virginia	87.6
		Washington	101.7
Massachusetts	101.4	West Virginia	78.6
Michigan	113.7	Wisconsin	110.8
Minnesota	116.4	Wyoming	107.4
Mississippi	57.4	District of Columbia	128.6
Missouri	85.6		

Source: Data from Elementary and Secondary Surveys Branch for Use In Title I, ESEA.

The index of per-pupil payment rates actually used to distribute title I funds in fiscal year 1972 is shown in table 2. The degree to which this adjustment is considered equitable is open to question, particularly with regard to the high-spending and the low-spending States. The 32 States with per-pupil expenditures below the national average were all brought up to average expenditures in computing their payment rates. While these are generally lower income States and may have lower expenditures for this reason, many of them are also States in which teacher salaries and prices generally are below national average rates. To bring all these States up to the national average is in conflict with the fact that, in at least some of these States, title I dollars have greater than average purchasing power. At the other extreme, there are no limits on the maximum payment rate, and this too can cause inequities. High State expenditures are rewarded by higher title I payments. Although high expenditures may be caused in part by the higher costs of purchasing educational resources, they may also result from the fact that States in the upper spending range simply have greater resources and choose to spend them on education. To the extent that this is the case, the limited funds from a national program should not be directed heavily to the States that least need them.

REFORM AND ITS OUTCOME

These considerations made it apparent that it was necessary to modernize the title I formula. It was also apparent that the considerations of the structure of the formula could not be separated from considerations of data availability. It is significant that these considerations became an integral part of the policymaking process of both Congress and the Administration.

Political considerations were naturally of great importance to members of Congress as they viewed the impact of various formulas on the funding that would come to their jurisdictions. In the final analysis, however, political considerations were not paramount—equal priority was given to assuring that the formula would target on the disadvantaged, as it was intended to do, and that it would not suffer the aging process that had befallen the 1965 formulation.

The updating issue was of particular interest. The 1965 formula had shown the significance of the errors that could arise over time. Another difficulty, however, lay in the fact that, since each jurisdiction was more or less used to its allocation, substantial political problems might be created by righting in one stroke the wrongs that had built up over a decade. The gains

and losses in funding under a reformed allocation could be very large, and this assured a heated debate. In fact, 2-1/2 years passed before a consensus was reached on a new formula. Congress did not wish a repetition of the conflict as time passed on.

Of the many proposals offered, the following three options are representative of major approaches. Our interest is directed toward the specification of the low-income criteria for eligibility, but plans also specify a payment rate which is briefly discussed below. The central characteristics of these plans are summarized in table 3. Also discussed are Congressionally-mandated studies on title I data that emerged in conjunction with the formula decision.

The three proposals under review for formula reform represent the positions of: (1)The Administration; (2) Congressman Quie, Ranking Minority Member of the House Subcommittee on Education; and (3) Congressman O'Hara, Democrat of Michigan.[7] These plans are first reviewed with respect to their eligibility criteria, and then, briefly, with respect to their proposed payment rates.

The cornerstone of the Administration's plan (table 3, column 2) was the adoption, as its criterion of low income, of the poverty index revised and approved by a Federal interagency committee in 1969 and hereafter referred to as the Federal poverty index. This index was originally developed at the Social Security Administration by Mollie Orshansky.[8] The measure had been widely used in statistical studies as the yardstick of poverty; but its application in the administration of the largest Federal program of aid to education represented a novel use that was subject to careful Congressional scrutiny.

While notions of poverty cannot be wholly divorced from prevailing societal values, the Federal poverty index offers a reasonably objective basis for defining those who are poor. The poverty index is pegged around the U.S. Department of Agriculture's food plans which specify the cost to different types of families of the amounts and kinds of food that would yield them a diet adequate for emergency purposes. In all, separate poverty thresholds are calculated for 124 different family types, distinguished by sex of head of household, the number of children under 18, the number of other persons present in the home, and whether their household residence is farm or nonfarm.

Most important, the Federal poverty index provides for an annual update to reflect changes in family living costs. Prior to 1968, the poverty thresholds were adjusted each year by changes in food costs published annually by the Department of Agriculture. Changes in food prices in recent years have failed, however, to be a good indicator of the total rise in living costs as reflected by the Consumer Price Index (CPI). Therefore, the CPI is now employed to annually adjust the poverty levels.

The Federal poverty index was not, in all respects, a satisfactory measure of the low-income population. A point of major concern to Congress was its failure to adjust explicitly for geographic differences in living costs, other than those for farm/nonfarm differences.[9] In particular, representatives of center city districts argued that their higher living costs went unrecognized. This problem is not easily correctable as the Consumer Price Index is available only for selected metropolitan areas and cannot be adopted as a national cost adjustment.

The Quie proposal (table 3, column 3) was built upon the basic structure of the 1965 act. It retained the double criteria of a single (although higher) threshold for low-income families and the additional eligibility of children from families with annual AFDC payments over the threshold, but altered their form to reflect the experience of the 1960's. Accordingly, low income was adjusted upward to $3,000 and only two-thirds of the children in AFDC families with payments over $3,000 were counted for purposes of funding. The rationale of the $3,000 cutoff was that it roughly equaled the 1960 threshold of $2,000 adjusted upward for the rise in living costs during the sixties. A $3,000 standard, which was still below the average for the Federal poverty index ($3,750 for a family of four), suggested that the original $2,000 standard was inadequate to begin with. Moreover, any fixed level suffers the same defects of aging that befell the $2,000 standard.

The matter of weighting the AFDC component comprised a major issue between pro- and anti-AFDC factions. Critics argued that AFDC was a variable yardstick of poverty that favored high income States that could afford higher welfare payment levels. Proponents of AFDC countered that the AFDC add-on was a necessary adjustment, however crude, for high living costs, particularly in heavily urbanized States.

The O'Hara proposal (table 3, column 4) opted for a more radical approach to reform than the first two. O'Hara would simply count, for purposes of payment, all school-aged children (ages 5 to 17) in each State. An advantage of this approach is that the formula can be updated from annually revised U.S. Bureau of the Census estimates of State populations. This formula posed a serious conflict among policy priorities. The gain in currency of information under O'Hara had to be traded off against the possible loss of a well-defined target population—children from low-income families.

The three plans also differed in their proposed rate of title I payments per eligible child. The Administration and the Quie proposals were again similar to existing law, with certain modifications. The Administration program lowered the minimum State rate to two-thirds of the national average per-pupil expenditures. The Quie program retained the minimum at the national average but introduced a maximum rate of 120 percent of national average spending. The O'Hara formula suggested that the payment rate serve as a device for recognizing lower income areas. Each State's payment rate was adjusted by the inverse of the ratio of that State's income per child to the national average. The distribution of funds within States was not, however, limited to low-income populations.

The proposals just discussed were differentially advantageous depending on what efforts would simultaneously be made to improve data availability. The O'Hara proposal, with its shift to total school-age population, would be easiest to adopt since it did not require updating the low-income standard between census years. The Quie proposal to include AFDC at reduced weight represented a good compromise if more direct measures of interarea differences in living costs were not developed. The Federal poverty index, with an objectively determined standard

[7] Congressman Perkins, Chairman of the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor also submitted a major proposal. It is not reviewed in detail here, because most of its components are contained in the three proposals discussed.

[8] For detailed discussion of the SSA poverty standards, see "Revision in Poverty Statistics, 1959 to 1968," Current Population Report, Series, P-23, No. 28, August 12, 1969 and Mollie Orshansky, "Who's Who Among the Poor: A Demographic View of Poverty," Social Security Bulletin, July 1965.

[9] The poverty income level for a farm family is computed as 85 percent of the level of the nonfarm family with equivalent characteristics.

Table 3. Comparison of Distribution Formulas for Disadvantaged of Educational Funds

Item	Title I Law (1965) (1)	1972 alternatives			P.L. 93-380
		Administration (2)	Quie (3)	O'Hara (4)	
Eligible population[1]	Children from families with income less than $2,000, plus children in AFDC families with income over $2,000.	Children from families defined poor under the Federal poverty index	Children from families with income less than $3,000 plus 2/3 of children in AFDC families with income over $3,000.	All children of school age (5 to 17)	Children from families defined poor under the Federal poverty index plus 2/3 of children in AFDC families with income above current year Federal poverty index for a family of four
Payment rate per child[2]	50 percent x maximum of State or national average per pupil expenditures	35 percent x maximum of (State average expenditure per child or 2/3 national average expenditure per child)	40 percent x maximum of State average expenditure per child or National average expenditure per child, except that the payment rate cannot exceed 120 percent of national average	100 percent (50 percent of the ratio of State average income per child divided by the National income per child), except that percent cannot be less than 33-1/3 percent or greater than 66-2/3 percent.	40 percent of State average expenditures, except that the rate cannot be less than 80 percent or more than 120 percent of national average

[1] In each case, the eligible population also includes children in State institutions for the delinquent, etc.
[2] The payment rate per child is the amount per child which a State would receive if the bill were fully funded. The exception is the O'Hara formula, which weights the eligible population in each State by the payment rate, and distributes the total appropriation across States on the basis of each State's share of the national total weighted population.

of need, annually revised, appeared particularly advantageous if low-income data were also revised between census years.

Congress, as it turned out, saw fit to pass a comprehensive set of title I legislative amendments, addressing both formula and data needs simultaneously.[10] The formula revisions compromised between the Administration and Quie proposals (table 3, column 5) rejecting the radical O'Hara formula, as follows: (1) Eligibility to rest on children from families defined as poor, utilizing the 1970 census poverty criteria (based on Federal poverty index of 1969), and two-thirds of the children in AFDC families with incomes above poverty level (the Quie formula), and (2) a payment rate of State average spending per pupil with both upper and lower limits (80 percent and 120 percent of national average spending).

The Congressionally mandated studies will fill some data gaps and determine the feasibility of filling others. These studies cover:

a) Section 822a specifically requires the Secretaries of Commerce and of the Department of Health, Education, and Welfare to furnish current data on the title I low-income population on a State representative basis. In conjunction with the annually revised Federal poverty index, these numbers enable the update by State of title I allocations prior to the 1980 census.

b) Section 822b mandates a study of the feasibility of updating the number of title I eligible children across school districts within States.

c) Section 823 is a study of the adequacy of the Federal poverty index as a measure of poverty to include the availability of more current data, cost of housing data, income distribution data, and labor market, wage rate, and unemployment rate data.

[10] These provisions are contained in the Education Amendments of 1974, P.L. 93-380.

ADDITIONAL EDUCATIONAL REQUIREMENTS

The title I formula of the Elementary and Secondary Education Act (ESEA) is the most publicized example of a Federal educational program in need of State and local low-income data, but it is by no means the only important example. Many other Federal educational programs have equal educational opportunity as an objective, and consequently, also target on the low-income child. The data needs of such programs should be considered along with title I requirements, not only to prevent duplication but also to help in determining the relative priority of data needs in relation to policy.

The specification of data requirements is more complicated than generally recognized. Item content, geographic detail, frequency of collection, and accuracy of data all form part of the determination of requirements. The debate on the title I formula is a good example of issues relating to the frequency and accuracy of updating the low-income-child counts at the local level.

Another need, of a different sort, for low-income data emerges from the current debate on school finance. A number of State courts have found that existing spending disparities across school districts, attributable to local wealth-based taxation, are unconstitutional, and pressures for Federal involvement are building. But the equalization of educational opportunity across school districts must consider educational outcomes, as well as educational spending levels, in determining inequities in educational opportunity. Low family income is needed in the development of a Federal equalization strategy. Although property valuation has been the measure of ability to finance education traditionally used in examining disparities, family income may be a better measure since taxes are ultimately paid out of income. In this case, a district's average income, either per pupil or per capita, is the preferred statistic.

Combined with other socioeconomic or demographic series, income data can address other issues of educational policy. For instance, many Federal programs attempt to reach children with special educational needs other than those caused by economic deprivation. Examples include bilingual or handicapped education programs. It is essential to know how these groups overlap with the low-income child to estimate the total target population and the Federal costs to serve this population. Another example comes from the Federal government's desegregation activities. We know a great deal about the effects of desegregation on removing racial isolation in schools, but know very little about its effects on the segregation of children across family-income classes. Economic desegregation may be as basic to educational objectives as racial integration. Still a third example would be data on the relationship of income to educational attainment as an important indicator of the actual extent to which the goal of equal educational opportunity is achieved.

Education is unique in requiring geographic detail at the school district level—and even at the school attendance level. These are the natural administrative units in the system of delivering education, and the use of data in larger divisions, such as counties, introduces errors that cannot be countenanced in the operation of many programs. On the other hand, the normal unit for U.S. Bureau of the Census tabulations is the general-purpose government. Census tabulations are frequently of limited use in educational analysis or policymaking simply because the school districts are not conterminous with the general-purpose governments. The U.S. Office of Education has recently attempted to bridge that gap by recoding 1970 census data by school district.[11]

Census data routinely provided by school district could serve a number of needs. They could improve allocations in a number of Federal formulas that use economic need as an allocative factor. These formulas, including title I, have been limited to the county as the lowest unit of distribution. We noted in an earlier section that in this circumstance the State determines the subcounty allocations to school districts. But audit reports have found that these State determinations are often inequitable. The school finance controversy also requires district-level data for its analysis. Again, in the desegregation area, whether or not high-income families have flown from school systems in which desegregation is taking place cannot be answered without data at the district level.

As we pointed out earlier, educational needs also extend below the district to the school attendance area. Many districts have already developed estimating procedures on their own to locate school attendance areas of high poverty concentrations. The need to distribute title I funds below the district level was a major force in this development, but the same information could serve other uses. There is a need to know whether school districts discriminate against schools serving low-income neighborhoods in the allocation of their school services. The extent of socioeconomic integration between schools is another use. However, with the busing of children between neighborhoods, census data must be adjusted to determine actual student composition by schools.

Added geographic detail should not come at the expense of accuracy of information. The sample size diminishes with the size of geographic area, thereby raising the error of estimate. The school district mapping study was forced to exclude certain school districts (those with less than 300 pupils) because of large sampling errors. With respect to the income issue, income questions are asked of only 20 percent of households; complete enumeration of all households would improve accuracy, but would have to be weighed against competing uses for this interviewing time. Another consideration is that population mobility also increases as the size of the geographic area diminishes which reduces the value of census data over time.

The importance of updating income data between census years has already been shown by the title I example. How frequently data should be updated will depend on how rapidly error increases. This will also depend on other requirements such as the size of the geographic area. Updating across States is expensive, but how expensive depends on the degree of accuracy desired. The trade offs between costs and accuracy are considerable. This will be described with respect to the update of the title I poverty counts at the State level by other papers in this session.

SUMMARY REMARKS

From what we have seen in this brief review, it is clear that the Federal education programs are important requesters of data on low-income populations. Choices must obviously be made among competing demands for data, and in making these choices it is necessary to set up a process by which the requirements for data can be defined and evaluated. A primary difficulty is to assure that the data requirements are directly correlated with program objectives, current and future. Program objectives are most often stated in such highly general terms that it is necessary to "operationalize" them—that is, to establish the practical link between the abstractly stated objectives and the interview or questionnaire form.

It is commonplace that there should be strong interaction between the policy people who will use the information and the statistical agencies who generate the data. It is also commonplace, however, that this idealized interaction so seldom occurs that it is regarded as impossible in practice. Each group—the policymakers and the data collectors—has quite separate priorities. The policy people are dissatisfied with the quality and usefulness of information, and the data agencies are frustrated with the inability of policymakers to specify their real needs in sufficient detail to serve as a basis for action.

When an example comes along, therefore, in which a joint process of consideration of policy and data issues simultaneously takes place, then it seems worthwhile to examine the occurrence in some detail. We trust that the title I program described here provides one such example.

[11] "1970 Census Fourth Count—1970 Elementary and Secondary General Information Survey," prepared under the direction of William Dorfman, U.S. Office of Education.